

Remarks

Claims 9-21 are pending. Favorable reconsideration is respectfully requested.

The claims are directed to a process for accelerating the setting of construction chemical products containing hydraulically setting binders, such as cements, mortars, tile adhesives, and the like. This acceleration in setting is achieved by adding an accelerant composition containing a redispersible polymer powder and an accelerant selected from alkali and alkaline earth metal salts of organic C₁₋₄ carboxylic acids.

Claims 9-16 have been rejected under 35 U.S.C. § 102(b) as anticipated by Eck et al. U.S. 5,753,733 ("*Eck*"). Applicants respectfully traverse this rejection.

In formulating the rejection, the Office states that:

Eck et al. teach a polymer powder compositions (see example 1) based on mixed polymers of vinyl acetate, ethylene and an acrylate and based on polyvinyl alcohol as a protective colloid, sodium formaldehyde sulfoxylate salt being contained therein, and 10 percent by weight calcium or magnesium carbonate salt being added directly after the spray drying.

Eck et al. also discloses the use of these compositions in chemical building products, or in joint mortar, in conjunction with cement (see claim 10).

Thus, the requirements for rejection are met.

This last statement is incorrect, however. *Eck* teaches preparation of certain hydrophobically modified dispersion powders by aqueous addition polymerization of conventional unsaturated monomers such as vinyl acetate in the presence of organosilicon compounds having a boiling point > 160°C. During the polymerization, a redox initiator system employing sodium formaldehyde sulfoxylate (sodium hydroxymethane sulfinate); Na OS(O)-CH₂OH can be used. However, this compound is a strong reducing agent, and is not the sodium

salt of a C₁₋₄ carboxylic acid. It is not a carboxylic acid at all. The pH of the polymerization can be mediated by addition of an alkali metal carbonate, and after spray drying, it is possible to add calcium carbonate or magnesium carbonate as antiblocking agents. None of these latter compounds are salts of a carboxylic acid, and none are known to have any accelerant effect on setting of mortars.

Since *Eck* does not disclose any accelerant which is an alkali or alkaline earth metal salt of a C₁₋₄ carboxylic acid, *Eck* does not anticipate the claimed invention. Withdrawal of the rejection of claims 9-16 over *Eck* under 35 U.S.C. § 102(b) is respectfully solicited.

Claims 9-16 have been rejected under 35 U.S.C. § 102(b) as anticipated by Geissler U.S. 6,331,587 ("*Geissler*"). Applicants respectfully traverse this rejection.

The Office states

In examples 1 and 3, Geissler teaches the production of polymer powder compositions that are redispersible in water and based on mixed polymers of vinyl acetate, vinyl ester of versatic acid, butyl acrylate and two protective colloids of partially saponated polyvinyl alcohols with Hoppler viscosities ranging from 1 to 30 and a degree of hydrolysis of 80 to 98 (see claim 4), the compositions containing sodium acetate salt.

Geissler teaches the use of these compositions in chemical building products in conjunction with cement (col. 4, lines 7-24).

Thus, the requirements for rejection are met.

It is true that *Geissler* teaches that sodium acetate can be added to the aqueous polymerization medium during addition polymerization of unsaturated monomers to control pH to the slightly acid range, pH 4-7 (column 3, lines 44-47). However, the amounts necessary to operate in this pH range are quite small, since the other polymerizable ingredients are neutral or only slightly acidic. For instance, in Example 1, 2.65 parts of sodium acetate is added to a

polymerization reaction employing a total of 1410.80 g of polymer constituents, not including slight amounts of defoamer, surfactants, and catalyst.

When dried, the resulting polymer will contain only at most 0.19 weight percent sodium acetate.¹ This amount is inconsequential and cannot accelerate the setting of cementitious building materials. The claims require an accelerant, i.e., a substance which accelerates setting.

Moreover, claim 9 has been amended to recite that the minimum amount of accelerant is 3 weight percent. The amount of sodium acetate remaining in *Geissler's* product (assuming that it did remain in the product) is less than that claimed by a factor of more than 16. *Geissler* is not directed to accelerating the setting of construction chemical compositions, but rather to a process for polymerizing using an azo initiator. *Geissler* does not disclose any composition containing minimally 3 weight percent of an alkali or alkaline earth metal salt of a C₁₋₄ carboxylic acid, and thus does not anticipate the claimed invention. Withdrawal of the rejection of the claims under 35 U.S.C. § 102(b) over *Geissler* is respectfully solicited.

Applicants submit that the claims are now in condition for Allowance, and respectfully request a Notice to that effect. If the Examiner believes that further discussion will advance the prosecution of the Application, he is highly encouraged to telephone Applicants' attorney at the number given below.

¹Since the dispersion is acidic, a portion of this will be in the form of acetic acid, which will evaporate upon drying the polymer.

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Respectfully submitted,

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